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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,893	04/12/2004	S. Jamaloddin Golestani	129250-001086/US	2504

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EXAMINER	
APPIAH, CHARLES NANA	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/821,893	GOLESTANI ET AL.	
	Examiner	Art Unit	
	Charles N. Appiah	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 17-27* is/are rejected.

7)☒ Claim(s) *12-16 and 28-32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-11 and 17-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Bejerano et al. (US 2005/0190731).

Regarding claim 1, Bejerano discloses a method for allocating channels from among a group of available channels (pathways 4a to 4n, see fig. 1, p.2, [0025]), to one or more cells within a wireless LAN (WLAN) (APs 2a-2n, see Fig. 1, p.2, [0025]), without causing unacceptable interference comprising: dividing a time period (CFP 6, see fig. 2, p.2, [0017]) into frames (slots, see fig. 2, p.2, [0017]), each frame having a substantially short duration (see p.2, [0017]); generating, for each frame, a set of active WLAN cells (non-interfering APs 2a-2n, see p.3, [0027]-[0029]) from the one or more cells based on an allocation vector (see p.2, [0022], p.3, [0027]); allocating, for each frame and to each one of the one or more active WLAN cells (APs 2a-2n, see fig. 1, p.2, [0025]), one or more channels (pathways 4a to 4n, see fig. 1, p.2, [0025]) from among the group of available channels (controller 4 controls transmission along pathways 4a-4n to APs 2a-2n, see p.2, [0025]); permitting the active WLAN cells (non-interfering APs 2a-2n, see

p.3, [0027]-[0029]), during a given frame (slots, see fig. 2, p.2, [0017], [0029]), to transmit (transmission of data by non-interfering access points, see figs. 1 and 4, p.3, [0029]); and preventing WLAN cells (adjacent/interfering APs, see p.3, [0027]), that are not allocated a channel during a given frame, from transmitting during the given frame (controller 4 transmits instructions to APs 2a-2n preventing adjacent APs from sending their beacon messages simultaneously, see p.3, [0027]).

Regarding claim 17, Bejerano et al discloses a controller (central controller 4, see p.2, [0017]), for allocating channels from among a group of available channels (pathways 4a to 4n, see fig. 1, p.2, [0025]) to one or more cells within a wireless LAN (WLAN) (APs 2a-2n, see fig. 1, p.2, [0025]) without causing unacceptable interference, operable to: divide a time period (CFP 6, see fig. 2, p.2, [0017]) into frames (slots, see fig. 2, p.2, [0017]), each frame having a substantially short duration (see p.2, [0017]); generate, for each frame, a set of active WLAN cells (non-interfering APs 2a-2n, see p.3, [0027]-[0029]) from the one or more cells based on an allocation vector (see p.2, [0022], p.3, [0027]); allocate, for each frame (slots, see fig. 2, p.2, [0017], [0029]), and to each one of the one or more active WLAN cells (APs 2a-2n, see fig. 1, p.2, [0025]), one or more channels (pathways 4a to 4n, see fig. 1, p.2, [0025]) from among the group of available channels (controller 4 controls transmission along pathways 4a-4n to APs 2a-2n, see p.2, [0025]); permit the active WLAN cells (non-interfering APs 2a-2n, see p.3, [0027]-[0029]), during a given frame (slots, see fig. 2, p.2, [0017], [0029]), to transmit (transmission of data by non-interfering access points, see figs. 1 and 4, p.3, [0029]); and prevent WLAN cells, that are not allocated a channel during a given frame

(adjacent/interfering APs, see p.3, [0027]), from transmitting during the given frame (controller 4 transmits instructions to APs 2a-2n preventing adjacent APs from sending their beacon messages simultaneously, see p.3, [0027]).

Regarding claims 2, 4, 18 and 20, Bejerano further discloses allocating, during each frame, a channel form the set of available channels to more than one active cell substantially simultaneously (assignment of slots to APs, page 2, [0017]).

Regarding claims 3 and 19, Bejerano further discloses wherein each cell which is allocated a same channel as any other cell during the given frame is sufficiently distant from each other cell allocated the same channel to minimize cross interference (see page 2, [0017-0022]).

Regarding claims 5-7 and 21-23, Bejerano further discloses wherein the set of channels available for allocation may vary with time and the duration of each frame is substantially the same and substantially different (see Fig. 2, page 3, [0031]).

Regarding claims 8 and 24, Bejerano further discloses wherein the set of available channels comprises radio frequency channels (see page 4, [0048]).

Regarding claims 9 and 25, Bejerano further discloses allocating one or more channels to the one or more active WLAN cells at the beginning of the frame (see page 2, [0019]).

Regarding claims 10 and 26, Bejerano's teaching of only non-interfering APs being permitted to transmit beacon messages of their own during the beacon transmission phase, page 2, [0025]), meets the feature of generating the set of active WLAN cells fro man activation vector during a given frame.

Regarding claims 11 and 27, Bejerano further discloses allocating, during each frame, the one or more channels to the one or more active cells based on an allocation vector that satisfies a maximum allowed cross interference (see page 2, [0022]).

Allowable Subject Matter

4. Claims 12-16, 28-32 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sugar et al. (7,050,452) discloses a system for interference mitigation among different WLAN communication protocols.

Del Prado et al. (US 2003/0123405) discloses the use of overlapping network allocation vector for avoiding collision in a WLAN.

West (5,574,979) discloses a method for avoiding interference in a hierarchical communication system.

Horvat et al. (7,027,424) discloses a method for avoiding interference in a digital communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles N. Appiah whose telephone number is 571 272-7904. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CA

CHARLES APPIAH
PRIMARY EXAMINER